

## Avaya Servers and Avaya Gateways

The Converged Infrastructure portfolio extends the power of converged networks across your enterprise to help you triumph over the bottom-line realities of business: the need to drive revenue, reduce costs, redeploy resources and serve customers better every day.

Communication equals a competitive advantage. Today's enterprise is changing. As organizations enter new markets, open branches closer to customers and introduce remote work options, they become increasingly distributed and mobile. Yet more than ever they must run lean while gaining full value from every resource.



The Avaya Converged Infrastructure is designed to build on your existing communication investments and deliver the availability and security you require. So your enterprise can pursue opportunities freely, and maximize the effectiveness of people and processes.

With an Avaya Converged Infrastructure solution you receive the benefits of Intelligent Communications. This modular architecture of servers brings Avaya Aura™ Communication Manager call processing and control through a distributed network of gateways, to adapt to your enterprise's needs. This software delivers uniform telephony

services to headquarters, branch locations and mobile users all across your enterprise. Here is a cost-effective, reliable and highly flexible telephony solution – networked and based on open-standards – for one location or multiple sites, regardless of scale or distance. Intelligent Communications equals RIGHT TIME, RIGHT DEVICE, RIGHT PERSON, RIGHT NETWORK

Now you can choose your own path to convergence, at your own pace. . . with confidence.

## Avaya Aura Communication Manager

### Powering the benefits of IP Telephony through Avaya Servers and Gateways

Avaya Aura Communication Manager provides core communications services that enable innovative unified communications and contact center solutions, making people more productive, customers more satisfied, and businesses more effective. This next major release of Avaya Aura Communication Manager is revolutionary, providing significant new business agility and cost savings by changing how communication solutions are architected, and evolutionary, allowing customers to easily and incrementally benefit from new capabilities while leveraging existing investments. Next generation Avaya Aura Communication Manager capabilities include SIP session management, single cross-enterprise dial plans and administration, increased multi-vendor integration, aggregated presence and inclusion of Avaya one-X® UC interfaces, new reduced footprint deployment choices, and extensions to our rich and reliable voice and video telephony features.



Key customer benefits of the new Avaya Aura Communication Manager release are:

- **Business agility** driven through a holistic enterprise architecture for connecting users, applications and systems
- **New cost savings** from SIP connectivity and reduced PSTN usage through a single enterprise-wide dial plan
- **Increased productivity** from the faster deployment of the right unified communications applications to the right users everywhere
- **Increased customer satisfaction** by better connecting people and accelerating processes in real-time across the “customer ready” enterprise

Avaya Aura Communication Manager is high-quality, high performance voice-

application software with rich call processing capabilities, extensive mobility features, and contact center functions. It supports widely accepted application-programming interfaces that enable a range of Avaya and third-party applications. This software, designed to meet country-specific networking requirements, brings continuous communications and application innovation to your enterprise, whether local or global.

**Flexibility** Avaya Aura Communication Manager is a core Avaya Business Communication Application, and helps support IP telephony solutions. It offers midsize to large enterprises greater flexibility. This software delivers applications over multi-protocol networks, so you can move to a converged network where and when it makes sense. It provides networking capabilities so you can extend applications

to the edge of your organization. Avaya Aura Communication Manager provides enhanced, distributed, standards-based networking that you can extend to communications devices such as cellular phones, PCs, and PDAs.

**Scalability** Supporting up to 18,000 IP Stations on one system, and up to 1 million users per network, Avaya Aura Communication Manager delivers scalability to Avaya Servers and Gateways. It provides up to three times the intelligent call processing capability of the largest Avaya Server – up to 600,000 busy-hour call completions. You can scale up a single network to support a large headquarters location and scale down to the smallest remote office, cost effectively and reliably. This software supports a uniform dial plan of up to 13 digits.

**Availability** Your network needs to be available 24/7, without compromise, to help drive your business results. To help meet that goal, Avaya Aura Communication Manager brings decades of reliability and performance in software design into the world of IP telephony. Proactive remote monitoring and maintenance combined with built-in self-diagnostics and self-healing capabilities provide enterprises the highest levels of business continuity. In all, Avaya Aura Communication Manager provides up to 99.999% reliability.

The Avaya communications architecture enhances survivability with powerful options ranging from Enterprise Survivable Servers placed strategically throughout an enterprise to maintain operations when the connection to the primary or even the secondary server

fails, to branch gateway recovery features such as modem dial back-up and enhanced Local Survivable Processors that keep remote locations up and running with 100% Avaya Aura Communication Manager feature availability.

## Avaya Servers and Avaya Gateways

As integral components of the Avaya Converged Infrastructure, Avaya Servers and Gateways provide highly flexible, scalable, and standards-based building blocks that can be mixed and matched to create customized solutions. They enable the centralized management efficiency of a single, streamlined network – while delivering best-in-class call-processing quality and availability that have made Avaya the communication solution provider more than 90% of FORTUNE 500® companies rely on every day.

## Server/Gateway Matrix

Powered by Avaya Aura Communication Manager, Avaya Servers and Gateways can be mixed and matched to create custom convergence solutions to meet your individual enterprise needs. The matrix which follows provides a broad-brush overview of the different server/gateway offerings and their features. Consider the information below when reviewing the server/gateway combinations in the matrix.

**Interoperability Standards:** SIP H.323, H.248, QoS, DiffServ, Via Controlling Server & Gateway: H.323, H.320 MMCH

**Network Standards:** All the following solutions support IP, ISDN-PRI, Q.Sig, and DCS

**Application Interface Standards:** All the following solutions support TSAPI, TAPI, JTAPI, DAPI, and ASAI

**System Management:** All the following solutions are supported by Avaya Integrated Management.



	S8300D Server	S8400B Server	S8800 Server Simplex	S8800 Server Duplex	S8510 Server	S8730 Server
<b>Form Factor</b>	Simplex Blade that resides within gateway slot	Simplex TN Card that resides in G650 Gateway Slot	Simplex Server Rack Mountable (single S8800 server)	Duplicated Server Rack Mountable (two S8800 servers)	Simplex Server Rack Mountable	Duplicated Server Rack Mountable
<b>Avaya Gateways Supported</b>	G700 G450 G430 G350 G250 IG550	G650 G700 G450 G430 G350 G250 IG550	G650 G700 G450 G430 G350 G250 IG550	G650 G700 G450 G430 G350 G250 IG550	G650 G700 G450 G430 G350 G250 IG550	G650 G700 G450 G430 G350 G250 IG550
<b>Operating System</b>	Linux	Linux	Linux	Linux	Linux	Linux
<b>Processor</b>	Intel 1.06 GHz Core Duo U7500 8GB Solid State Drive 8GB RAM Additional Hard Drive	Intel Pentium M 600 MHz Mobile Celeron processor 4 GB Solid State Drive 1 GB RAM Additional Hard Drive	Intel Xeon E5520 Quad Core / 2.26 GHZ (Nehalem). Two 146GB SAS 2.5" Hard Drives with RAID 1, 4 GB RAM, Removable compact flash card backup	Two S8800 server chassis, each with Intel Xeon E5520 Quad Core / 2.26 GHZ (Nehalem), Two 146GB SAS 2.5" Hard Drives with RAID 1; 4 GB RAM; Removable compact flash card backup	Intel Xeon Quad Core, 250GB SATA HDD with RAID 1, 2 GB RAM, Removable compact flash card backup	AMD Opteron Dual Core 2.4 GHz; 1 - 72 GB (SAS) HDD, Optional additional RAID 1 HDD; 4 - GB RAM; Removable compact flash card backup
<b>Number of Stations</b>	Up to 450 IP, digital, analog	Up to 900 IP, digital, analog	Up to 2,400 IP, digital, analog	18,000 IP stations (up to 36,000 endpoints, up to 12,000 IP endpoints)	Up to 2,400 IP, digital, analog	18,000 IP stations (up to 36,000 endpoints, up to 12,000 IP endpoints)
<b>Trunks</b>	Up to 450	Up to 400	Up to 800	Up to 12,000	Up to 800	Up to 12,000
<b>Busy Hour Call Completions (BHCC)</b>	Up to 10,000	Up to 10,000	Up to 100,000	Up to 600,000	Up to 100,000	Up to 600,000
<b>Networking</b>	50 gateways (G700, G450, G430, G350, IG550 & G250)	5 gateways (G700, G450, G430, G350, IG550 & G250)	250 gateways (G650, G700, G450, G430, G350, IG550 & G250)	250 Gateways (G700, G450, G350, G430, G250 & IG550)" "64 Port Networks (G650)"	250 gateways (G650, G700, G450, G430, G350, IG550 & G250)	250 Gateways (G700, G450, G350, G430, G250 & IG550)" "64 Port Networks (G650)"
<b>Hot Swappable</b>	No	No	Yes – RAID HDD	Yes – Servers, UPS, RAID HDD	Yes – RAID, HDD	Yes – Servers, UPS, RAID HDD
<b>Duplication (Shadowing)</b>	No	No	No	Duplex, High & Critical, SW duplication	No	Duplex, High & Critical, SW and HW duplication
<b>Survivability Redundancy ESS LSP</b>	Yes No No Yes	Yes No Yes No	Yes No Yes Yes	Yes Yes Yes No	Yes No Yes Yes	Yes Yes Yes No
<b>Electrical Requirements</b>	110V/240VAC	110/240 VAC or -48 VDC	110VAC/200-240VAC (47/63 Hz)	110VAC / 200-240VAC (40/63 Hz)	110VAC/200-240VAC (47/63 Hz)	110VAC / 200-240VAC (40/63 Hz)



Avaya S8300 Server with an Avaya G450 Gateway



Avaya S8510 Server



Avaya S8730 Server



Avaya S8800 Server

	G250 Gateway	IG550 Integrated Gateway	G350 Gateway	G430 Gateway	G450 Gateway	G650 Gateway	G860 - High Density Trunk Gateway
<b>Call Controller Support</b>	External via S8300, S8500, S8730, and S8800 Servers Internal via S8300 Server	External via S8300, S8500, S8730, and S8800 Servers No internal	External via S8300, S8500, S8730, and S8800 Servers Internal via S8300 Server	External via S8300, S8500, S8730, and S8800 Servers Internal via S8300 Server	External via S8300, S8500, S8730, and S8800 Servers Internal via S8300 Server	External via S8500, S8730, and S8800 Servers Internal via S8400 Server	External via S8730, S8800
<b>Expansion</b>	1 Media Module Slot (T1/E1 or USP WAN Module only)	6 Slots for Juniper PIMs and Avaya TIMs in Juniper J2320/J2350/J4350/J6350 router	5 Module Slots 1 High Density Module Slot	3 Module slots (7 slots with 2 EM200)	8 Module slots	14 Universal TN-based slots	3 Media Module slots + 1 dedicated slot for hot standby module
<b>Scalability</b>	Up to 14 extensions. Up to 4 trunks or T1/E1	Up to 100 extensions Up to 60 trunks	Up to 72 extensions Up to 60 trunks	Up to 150 endpoints Up to 150 trunks	Up to 150 endpoints Up to 150 trunks	Up to 5 units within a port network	up to 6000 channels (9 DS-3 ports)
<b>Telephone Compatibility</b>	6200/2500 Series Analog Phones 6400/8400 Series Digital Phones 4600 Series IP Phones 9600 Series IP Phones 1600 Series IP Phones IP Softphone R2.0+	6200/2500 Series Analog Phones 4600 Series IP Phones 9600 Series IP Phones 1600 Series IP Phones IP Softphone R2.0+	6200/2500 Series Analog Phones 6400/8400 Series Digital Phones 4600 Series IP Phones 9600 Series IP Phones 1600 Series IP Phones IP Softphone R2.0+	6200/2500 Series Analog Phones 6400/8400 Series Digital Phones 4600 Series IP Phones 9600 Series IP Phones 1600 Series IP Phones IP Softphone R2.0+	6200/2500 Series Analog Phones 6400/8400 Series Digital Phones 4600 Series IP Phones 9600 Series IP Phones 1600 Series IP Phones IP Softphone R2.0+	6200/2500 Series Analog Phones 6400/8400 Series Digital Phones 4600 Series IP Phones 9600 Series IP Phones 1600 Series IP Phones IP Softphone R2.0+	N/A (supports trunks only)
<b>Trunk Support</b>	Analog ISDN BRI E1/T1 IP (H.323 or SIP)	Analog ISDN BRI E1/T1 IP (H.323 or SIP)	Analog ISDN BRI/PRI T1/E1 Gigabit Ethernet IP (H.323 or SIP) over Frame Relay or PPP	Analog ISDN BRI/PRI T1/E1 Fast Ethernet	Analog ISDN BRI/PRI T1/E1 Gigabit Ethernet IP (H.323 or SIP) over Frame Relay or PPP	Analog ISDN BRI/PRI T1/E1 ATM H.323 or SIP over IP	DS-3, STM-1, OC-3 and IP (SIP only)
<b>Form Factor</b>	19" rack mounted 2U high	Modules for 19" rack mounted, 2U high device	19" rack mounted 3U high	19" rack mounted 1.5U high	19" rack mounted 3U high	19" rack-mounted 8U high	19" rack mounted, 5U high

Avaya IG550 Gateway in Juniper J6350 Router



Avaya G350 Gateway



Avaya G250 Gateway

## Avaya Servers

The Avaya family of servers provides a robust application platform based on industry-standard operating systems to support distributed IP networking and centralized call processing across multi-protocol networks. These servers are available as an integrated solution or can operate independently, with ability to handle up to 600,000 busy hour call completions.

### Key features:

- The Avaya Enterprise Survivable Server (ESS) solution allows a business to have greater flexibility of consolidation by providing new survivability options.
- Redundant, survivable call and processing supports crucial business continuity
- Distributed, survivable IP networking supports campus, global multi-site, and branch environments
- Centralized call processing distributed across multi-protocol networks support a highly diversified network architecture
- Multiple server options, including integrated or stand-alone configurations, based on processing capabilities
- Messaging integration with the Avaya Aura Communication Manager Messaging embedded in the Avaya S8300 and S8400 Servers

## Avaya Gateways

Designed to extend the power of Avaya Aura Communication Manager software to all users in the enterprise, Avaya Gateways address your need for converged solutions that support both TDM and IP telephony environments by seamlessly integrating traditional circuit-switched and IP-switched interfaces.

This gives your enterprise great flexibility to adapt to changing business needs. Avaya Gateways allow your organization to evolve easily from TDM-based telephony to the next generation of IP infrastructures, including those based on the open SIP (Session Initiation Protocol) standard.

Avaya Gateways are available in compact standalone, stackable, and chassis-based configurations that support Analog, Digital, IP PoE, LAN, and WAN interfaces. They are optimized for blended TDM/IP and all IP environments in distributed enterprises, small remote offices and large campus environments with thousands of users.

### Key Features

- Interoperable with standards-based data networks to provide maximum flexibility and reduce total cost of ownership
- Survivability features and options that allow gateways to continue operating even if the primary server fails or in the event a WAN failure affects communications between the gateway and the server.
- Support multi-protocol environments, maximizing investment protection for enterprises that require concurrent support of TDM and IP-based telephony
- Redundant system and network options that support high-availability configurations for both TDM and IP-based solutions
- Designed for distributed networked telephony, extending the benefits of Avaya Aura Communication Manager to all enterprise users regardless of location
- Connectivity across any public or private network using a variety of interface options over TDM, ATM, Ethernet, Frame Relay, or PPP

- High-density 19" rack-mountable systems that support high-availability IP Connect upgrades from Avaya DEFINITY® PBX/servers

## Avaya G250 Gateway

The G250 is designed to meet the communications needs of small branch offices by connecting everyone in an organization and delivering the full set of enterprise communication features to the branch employees. The gateway is designed to support offices with up to 14 users and comes with analog, ISDN-BRI or T1/E1 trunk ports to provide local connections. Integrated switched 10/100 PoE Ethernet ports connect to PCs and IP telephones eliminating the need for additional branch network equipment as well as digital telephones, protecting your previous investment. An Ethernet WAN port is provide for connecting to the centrally located server over the WAN network, or alternatively, a WAN Module can be installed for E1/T1 or USP WAN connectivity. The G250 provides Standard

Local Survivability in the event of a WAN failure so branch employees can still communicate. It can also deliver 100% of Avaya Aura Communication Manager features by reconnecting to the primary or a secondary server using modem dial back-up or with Enhanced Local Survivability which can be provided by installing an S8300 Server inside the G250 gateway.

## Avaya G350 Gateway

The G350 is a powerful converged networking device that packs an IP Telephony Gateway, an advanced IP WAN router and a high-performance LAN switch into a compact

modular chassis. It's ideal for enterprises with distributed branch office locations requiring from 8-72 extensions.

The G350 easily accommodates existing on-site analog or digital phones, so you can extend the value of existing telephony investments even as you evolve toward H.323 or SIP-based telephony. The G350 has several survivability options that maintain operations in the event a WAN failure affects connectivity to the centrally located server. For example, the G350 provides Standard Local Survivability in the event of a WAN failure so branch employees can continue to communicate. The gateway can reconnect to the primary or a secondary server using modem dial back-up and can also have Enhanced Local Survivability by installing an S8300 Server inside the gateway.



## Avaya IG550 Integrated Gateway

The IG550 is telephony hardware and software that converts a Juniper J-Series router into a fully functional Avaya Gateway. Combining the IG550 and a Juniper J2320, J2350, J4350 or J6350 router delivers a one-box telephony, routing and security solution for branches with up to 100 employees. This integrated branch communications solution provides sustained network performance while under load, integrated voice and data security, and multi-level survivability options.

## Avaya G430 Gateway

The G430 Gateway is the ideal solution for low and midsize branches, either standalone or networked gateway linked to a central

Avaya Server. The G430 Gateway is designed for growth. Additional expansion modules can be deployed in a single site. The G430 modular design supports scalability of DSP resources and slots. The G430 has several survivability options, such as LSP or SLS, which maintain operations in the event a WAN failure affects connectivity to the centrally located server. For mid-sized enterprises, an installed S8300 Server working with single G430 Gateway serves as a primary call controller for call centers up to 80 agents, or as a business communications system for up to 150 users.

## Avaya G450 Gateway

The G450 Gateway is the ideal solution for midsize systems, call center applications, or use as a networked gateway for larger branch

office locations, linked to a central Avaya Server. The G450 Gateway is designed for growth. Multiple gateways can be deployed in a single site. The G450 modular design supports scalability of DSP resources and power and delivers superior capacity, availability and serviceability. The G450 has several survivability options, such as LSP or SLS, which maintain operations in the event a WAN failure affects connectivity to the centrally located server. For mid-sized enterprises, an installed S8300 Server working with the G450 Gateway serves as a primary call controller for call centers up to 300 agents, or as a business communications system for up to 450 users. An external S8510, S8730 or S8800 working with G450 gateways serves as a primary call controller for call center or as a business communications system.

## Avaya G650 Gateway

The G650 Gateway is the system of choice for large-scale enterprise communications and call centers. Designed for campus deployments with connection to an external Avaya S8500 or S8730 Server over the enterprise LAN or an internal S8400 Server, the G650 offers the features, scalability, and system uptime required for mission-critical applications. S8400 can also provide survivability for G650, serving as an ESS. Up to five G650 Gateways can be combined to form a high-capacity port network that can be integrated into many existing telephony networks, supporting voice connectivity over IP, TDM, or ATM transport.

## Avaya G860 Gateway

The Avaya G860 Gateway provides carrier-grade reliability and offers a significant reduction in hardware price and carrier

access charges for those Avaya IP Telephony implementations requiring high-density trunk capacity. Equipment consolidation produces operational and maintenance cost savings through reduced power, UPS and cooling needs. As a SIP-gateway, it integrates with not only Avaya Aura Communication Manager but also other SIP-based applications.

## Maximize converged network investments with Avaya Global Services

Avaya Global Services offers a single point of accountability to design, build, and manage multi-vendor communications networks worldwide. From needs assessment to business continuity planning, from integration to maintenance and management, Avaya Global Services can help you do more than ever before, with less than ever before. Plus, we provide a

single point of accountability for voice and data convergence in multi-vendor environments, providing you with the confidence and ability to reap business results at your own pace.

## Learn More

To learn more, talk to an Avaya Client Executive or Avaya Authorized BusinessPartner. For more information about Avaya and our other award-winning solutions, visit [avaya.com](http://avaya.com).

## About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit [www.avaya.com](http://www.avaya.com).

The Avaya logo consists of the word "AVAYA" in a bold, red, sans-serif font. The letters are closely spaced, and the 'A's and 'Y's have a distinctive shape.

INTELLIGENT COMMUNICATIONS

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